

WHAT IS CLAIMED IS:

1. A method for communicating optical traffic at a node, comprising:
  - receiving optical traffic on a network;
  - 5 demultiplexing the optical traffic into component signals of the optical traffic;
  - splitting at least one of the component signals into a drop signal and a continue signal;
  - receiving and recovering the drop signal;
  - 10 selecting between an add signal and the continue signal for communication on the network; and
  - multiplexing the selected signal with other signals for communication on the network.
- 15 2. The method of Claim 1, wherein demultiplexing the optical traffic into component signals comprises demultiplexing the optical traffic into component wavelengths.
- 20 3. The method of Claim 2, wherein demultiplexing the optical traffic into component wavelengths comprises demultiplexing the optical traffic into approximately forty component wavelengths.
- 25 4. The method of Claim 1, wherein:
  - demultiplexing the optical traffic comprises demultiplexing the optical traffic at a demultiplexer card; and
  - splitting the at least one of the component signals
- 30 comprises splitting the at least one of the component signals at the demultiplexer card.

5. The method of Claim 4, wherein splitting the at least one of the component signals at the demultiplexer card comprises splitting the at least one of the component signals at the demultiplexer card using array 5 waveguide technology or thin film filters.

6. The method of Claim 1, further comprising:  
splitting the drop signal into a first drop signal and a second drop signal;
- 10 receiving the first drop signal at a work receiver;  
and
- receiving the second drop signal at a protect receiver.
- 15 7. The method of Claim 1, wherein selecting between an add signal and the continue signal comprises selecting between an add signal and the continue signal at a 2 x 1 switch.

20 8. The method of Claim 1, further comprising tapping an optical supervisory signal from the optical traffic.

9. A system for communicating optical traffic at a node, comprising:

a node operable to receive optical traffic on a network;

5 a demultiplexer operable to demultiplex the optical traffic received at the node into component signals of the optical traffic;

10 a splitter coupled to the demultiplexer, the splitter operable to split at least one of the component signals into a drop signal and a continue signal;

a receiver coupled to the splitter, the receiver operable to receive and recover the drop signal;

15 a switch coupled to the splitter, the switch operable to select between an add signal and the continue signal for communication on the network; and

a multiplexer coupled to the switch, the multiplexer operable to multiplex the selected signal with other signals for communication on the network.

20 10. The system of Claim 9, wherein a demultiplexer operable to demultiplex the optical traffic into component signals comprises a demultiplexer operable to demultiplex the optical traffic into component wavelengths.

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11. The system of Claim 10, wherein a demultiplexer operable to demultiplex the optical traffic into component wavelengths comprises a demultiplexer operable to demultiplex the optical traffic into approximately 30 forty component wavelengths.

12. The system of Claim 9, wherein the demultiplexer and the splitter are positioned upon a demultiplexer card.

5       13. The system of Claim 12, wherein the splitter is operable to split at least one of the component signals into a drop signal and a continue signal on the demultiplexer card using array waveguide technology or thin film filters.

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14. The system of Claim 9, further comprising:  
a second splitter coupled to the splitter, the second splitter operable to split the drop signal into a first drop signal and a second drop signal;  
15       a work receiver coupled to the second splitter, the work receiver operable to receive the first drop signal;  
and  
a protect receiver coupled to the second splitter, the protect receiver operable to receive the second drop  
20 signal.

15. The system of Claim 9, the switch comprises a 2 x 1 switch.

25       16. The system of Claim 9, wherein the node comprises a tap operable to tap an optical supervisory signal from the optical traffic.

17. A system for communicating optical traffic at a node, comprising:

means for receiving optical traffic on a network;

5 means for demultiplexing the optical traffic into component signals of the optical traffic;

means for splitting at least one of the component signals into a drop signal and a continue signal;

means for receiving and recovering the drop signal;

10 means for selecting between an add signal and the continue signal for communication on the network; and

means for multiplexing the selected signal with other signals for communication on the network.

18. The system of Claim 17, wherein means for demultiplexing the optical traffic into component signals comprises means for demultiplexing the optical traffic into component wavelengths.

19. The system of Claim 17, wherein:

20 means for demultiplexing the optical traffic comprises means for demultiplexing the optical traffic at a demultiplexer card; and

25 means for splitting the at least one of the component signals comprises means for splitting the at least one of the component signals at the demultiplexer card.

20. The system of Claim 17, further comprising:  
means for splitting the drop signal into a first  
drop signal and a second drop signal;  
means for receiving the first drop signal at a work  
5 receiver; and  
means for receiving the second drop signal at a  
protect receiver.